

# *Bloodborne Pathogens*



OSHA Office of  
Training and  
Education

# Introduction

- ! Approximately 5.6 million workers in health care and other facilities are at risk of exposure to bloodborne pathogens such as human immunodeficiency virus (HIV – the virus that causes AIDS), the hepatitis B virus (HBV), and the hepatitis C virus (HCV)
- ! OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure

# Who is covered by the standard?

- ! All employees who could be “reasonably anticipated” as the result of performing their job duties to face contact with blood and other potentially infectious materials
- ! “Good Samaritan” acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure

# Some Workers Who are at Risk

- ! Physicians, nurses and emergency room personnel
- ! Orderlies, housekeeping personnel, and laundry workers
- ! Dentists and other dental workers
- ! Laboratory and blood bank technologists and technicians
- ! Medical examiners
- ! Morticians
- ! Law enforcement personnel
- ! Firefighters
- ! Paramedics and emergency medical technicians
- ! Anyone providing first-response medical care
- ! Medical waste treatment employees
- ! Home healthcare workers

# How does exposure occur?

- ! Most common: needlesticks
- ! Cuts from other contaminated sharps (scalpels, broken glass, etc.)
- ! Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with contaminated blood

# Exposure Control Plan

- ! Identifies jobs and tasks where occupational exposure to blood or other potentially infectious material occurs
- ! Describes how the employer will:
  - > Use engineering and work practice controls
  - > Ensure use of personal protective equipment
  - > Provide training
  - > Provide medical surveillance
  - > Provide hepatitis B vaccinations
  - > Use signs and labels

# Exposure Control Plan

- ! Written plan required
- ! Plan must be reviewed at least annually to reflect changes in:
  - > tasks, procedures, or assignments which affect exposure, and
  - > technology that will eliminate or reduce exposure
- ! Annual review must document employer's consideration and implementation of safer medical devices
- ! Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
- ! Plan must be accessible to employees

# Universal Precautions

- ! Treat all human blood and certain body fluids as if they are infectious
- ! Must be observed in all situations where there is a potential for contact with blood or other potentially infectious materials

# **Engineering and Work Practice Controls**

- ! These are the primary methods used to control the transmission of HBV and HIV
- ! When occupational exposure remains after engineering and work practice controls are put in place, personal protective equipment (PPE) must be used

# Engineering Controls

These controls reduce employee exposure by either removing the hazard or isolating the worker.

Examples:

- ! Sharps disposal containers
- ! Self-sheathing needles
- ! Safer medical devices
  - > Needleless systems
  - > Sharps with engineered sharps injury protections



# Safer Medical Devices

- ! *Needless Systems:* a device that does not use needles for the collection or withdrawal of body fluids, or for the administration of medication or fluids
- ! *Sharps with Engineered Sharps Injury Protections:* a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident

# Work Practice Controls

These controls reduce the likelihood of exposure by altering how a task is performed. Examples:

- ! Wash hands after removing gloves and as soon as possible after exposure
- ! Do not bend or break sharps
- ! No food or smoking in work areas



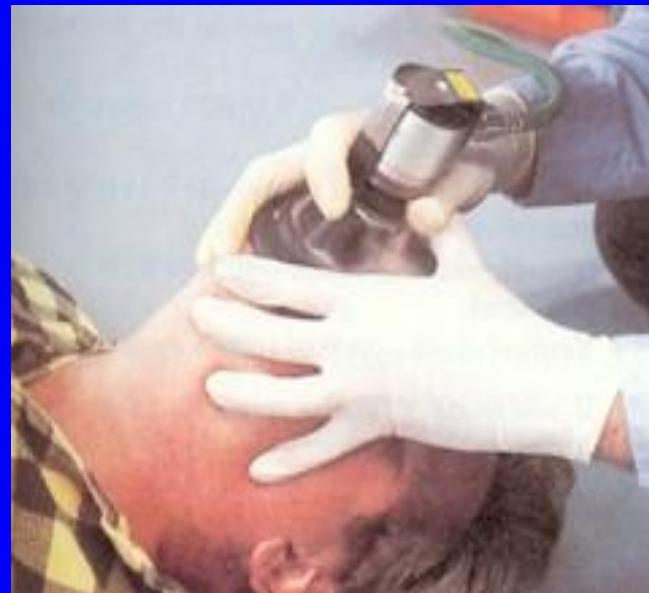
# Personal Protective Equipment

- ! Specialized clothing or equipment worn by an employee for protection against infectious materials
- ! Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
- ! Must be removed when leaving area or upon contamination



# Examples of PPE

- ! Gloves
- ! Gowns
- ! Face shields
- ! Eye protection
- ! Mouthpieces and resuscitation devices



# Housekeeping

Must develop a written schedule for cleaning and decontamination at the work site based on the:

- ! Location within the facility
- ! Type of surface to be cleaned
- ! Type of soil present
- ! Tasks or procedures being performed

# Housekeeping (cont'd)

Work surfaces must be decontaminated with an appropriate disinfectant:

- ! After completion of procedures,
- ! When surfaces are contaminated, and
- ! At the end of the work shift



# Regulated Waste

Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.



# Laundry

- ! Handle contaminated laundry as little as possible and use PPE
- ! Must be bagged or containerized at location where used
- ! No sorting or rinsing at location where used
- ! Must be placed and transported in labeled or color-coded containers



# Hepatitis B Vaccination Requirements

- ! Must make available, free of charge at a reasonable time and place, to all employees at risk of exposure within 10 working days of initial assignment unless:
  - > employee has had the vaccination
  - > antibody testing reveals immunity
- ! The vaccination must be performed by a licensed healthcare professional



# Hepatitis B Vaccination Requirements (cont'd)

- ! Must be provided even if employee initially declines but later decides to accept the vaccination
- ! Employees who decline the vaccination must sign a declination form
- ! Employees are not required to participate in antibody prescreening program to receive vaccination series
- ! Vaccination booster doses must be provided if recommended by the U.S. Public Health Service

# What to do if an exposure occurs?

- ! Wash exposed area with soap and water
- ! Flush splashes to nose, mouth, or skin with water
- ! Irrigate eyes with water or saline
- ! Report the exposure
- ! Direct the worker to a healthcare professional

# Post-Exposure Follow-Up

- ! Document routes of exposure and how exposure occurred
- ! Record injuries from contaminated sharps in a sharps injury log, if required
- ! Obtain consent from the source individual and the exposed employee and test blood as soon as possible after the exposure incident
- ! Provide risk counseling and offer post-exposure protective treatment for disease when medically indicated in accordance with current U.S. Public Health Service guidelines
- ! Provide written opinion of findings to employer and copy to employee within 15 days of the evaluation

# Biohazard Warning Labels

- ! Warning labels required on:
  - > Containers of regulated waste
  - > Refrigerators and freezers containing blood and other potentially infectious materials
  - > Other containers used to store, transport, or ship blood or other potentially infectious materials
- ! Red bags or containers may be substituted for labels



# Training Requirements

- ! Provide at no cost to employees during working hours
- ! Provide at time of initial assignment to a job with occupational exposure and at least annually thereafter
- ! Additional training needed when existing tasks are modified or new tasks are required which affect the worker's occupational exposure
- ! Maintain training records for 3 years



# Training Elements

- ! Copy of the standard
- ! Modes of transmission
- ! Site-specific exposure control plan
- ! Hazard recognition
- ! Use of engineering controls, work practices and PPE
- ! Live question and answer sessions

# Medical Recordkeeping Requirements

- ! Employee's name and social security number
- ! Employee's hepatitis B vaccination status
- ! Results of examinations, medical testing, and post-exposure evaluation and follow-up procedures
- ! Health care professional's written opinion
- ! Information provided to the health care professional
- ! Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law)
- ! Medical records must be maintained for duration of employment plus 30 years according to OSHA's rule governing access to employee exposure and medical records

# Sharps Injury Log

- ! Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps
- ! The log must be maintained in a way that ensures employee privacy and must contain, at a minimum:
  - > Type and brand of device involved in the incident
  - > Location of the incident
  - > Description of the incident

# Summary

- ! OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure
- ! Implementation of this standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers contracting AIDS, Hepatitis C, or other bloodborne diseases